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BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte TETSUJI KUDOH, TAKANOBU AOCHI, and HISATOSHI TSUKAHARA

Appeal 2011-011360
Application 12/076,188
Technology Center 3600

Before ANTON W. FETTING, MICHAEL W. KIM, and NINA L. MEDLOCK *Administrative Patent Judges*.

MEDLOCK, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's final rejection of claims 1 and 3-6. We have jurisdiction under 35 U.S.C. § 6(b). An oral hearing was held on January 24, 2013.

STATEMENT OF THE DECISION

We REVERSE.[1]

BACKGROUND

Appellants' invention relates to a method of boxing fuel injectors for an engine and, more particularly, to a method of preparing a box holding a large number of fuel injectors in which a predetermined quality is secured in a predetermined number of fuel injectors forming a set for one engine (Spec., para. [0001]).

Claim 1, reproduced below, is representative of the subject matter on appeal:

> 1. A method of boxing fuel injectors, a first number of which are scheduled to be mounted in an engine, in a box in a second number larger than the first number, each fuel injector has a characteristic value, wherein when the first number of the characteristic values forms a set, the number of combinations of the characteristic values where a total value of the one set's worth of the characteristic values becomes a first management value or less when selecting the one set's worth of the characteristic values from the second number of the characteristic values, is defined as the "number of good part combinations," and the number of possible combinations of the

[1] Our decision will make reference to the Appellants' Appeal Brief ("App. Br.," filed March 14, 2011) and Reply Brief ("Reply Br.," filed May 24, 2011) and the Examiner's Answer ("Ans.," mailed March 30, 2011).

one set's worth of the characteristic values is defined as the "number of possible combinations," the method boxes the fuel injectors in a box so that the number of the good part combinations becomes a ratio of a fourth management value or more to the number of possible combinations, the method comprising:

a step of measuring the characteristic value for the second number of fuel injectors;

a second management value judgment step of judging the characteristic value of each fuel injector based on second management value, the step scrapping the fuel injector as a defective part if the characteristic value of the fuel injector is larger than the second management value and concluding that the fuel injector is a passing part if the characteristic value is the second management value or less;

a step of loading the passing part fuel injector on a transport pallet;

a step of transporting the passing part fuel injector to a characteristic value sorting station, the characteristic value sorting station being provided with a first quality box able to store the second number of the fuel injectors and a second quality box able to store the second number of the fuel injectors;

a step of judging the characteristic value of the fuel injector transported to the characteristic value sorting station based on a third management value;

a step of storing the fuel injector in the first quality box if the characteristic value is equal to the third management value or less;

a third management value sorting step of storing the fuel injector in the second quality box if the characteristic value is larger than the third management value;

a step of judging if the fuel injectors stored in the second quality box have reached the second number;

a computation step of computing the characteristic values of the fuel injectors stored in the second quality box, the step computing a good part combination rate comprised of a ratio of the number of good part combinations with respect to the number of possible combinations;

> a good part combination rate judgment step of comparing and judging the good part combination rate in the second quality box with the fourth management value;
>
> a passing part transport step of transporting the second quality box as a passing part to a predetermined location at a shipment station side when the good part combination rate in the second quality box is larger than the fourth management value;
>
> a quality improvement step of taking out a third number of the fuel injectors of the second quality box from the second quality box, moving them to a predetermined location, taking out the same number of fuel injectors as the third number from the first quality box, and using these to replenish the second quality box when the good part combination rate in the second quality box is the fourth management value or less; and
>
> a recomputation step of recomputing the good part combination rate of the second quality box after the quality improvement step;
>
> wherein the characteristic value is a fuel-tightness value.

THE REJECTION

The following rejection is before us for review:

Claims 1 and 3-6 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

ANALYSIS

We are persuaded that the Examiner erred in rejecting claims 1 and 3-6 under 35 U.S.C. § 101. Applying the machine-or-transformation test, the Examiner concluded that claims 1 and 3-6 are directed to non-statutory subject matter because Appellants' claimed method is not tied to a particular machine and the recited claim steps do not involve the transformation of a particular article to a different state or thing (Ans. 4 and 14).

The Supreme Court clarified in *Bilski* that the machine-or-transformation test "is not the sole test for deciding whether an invention is a patent-eligible 'process' under § 101." *Bilski v. Kappos*, 130 S. Ct. 3218, 3221 (2010). However, the Court explained that this test remains a "useful and important clue or investigative tool." *Id.* The Examiner thus properly assessed patent eligibility under the machine-or-transformation test. We disagree with the Examiner's conclusion, however, that the method claims at issue are not transformative.

The claims are directed to a method of boxing fuel injectors, a first number of which are scheduled to be mounted in an engine, in a box in a second number larger than the first number, such that a predetermined quality is secured in the first number of fuel injectors forming a set for one engine. More particularly, the claimed method takes a first group of unspecified fuel injectors and selects, from that group, a second group of fuel injectors that has a particular set of characteristic values that are optimized to work together in an engine to obtain a satisfactory result. We thus agree with Appellants that the result of the claimed method is to "transform[ ] a large group of unorganized fuel injectors into an organized (i.e., "boxed") set of fuel injectors, the entire set of which meets necessary quality criteria" (App. Br. 13).

We, of course, are mindful that the machine-or-transformation test is not determinative of whether an invention is a patent-eligible process. However, we find no factors in the record that would weigh against patent eligibility.

For example, claim 1 does not recite purely mental steps, i.e., steps that can be performed in the human mind. The "loading," "transporting,"

"storing," and "quality improvement" steps, recited in claim 1, all require some physical action, i.e., the manipulation of particular objects (i.e., fuel injectors), and cannot be performed entirely in a human's mind.

The claim also does not merely describe an abstract idea or concept. Instead, it presents a specific application and improvement to a technology (i.e., the packaging of fuel injectors to ensure a predetermined quality in a predetermined number of fuel injectors that forms a set for an engine) in the marketplace, i.e., the automotive industry. *See, e.g.*, *Research Corp. Technologies, Inc. v. Microsoft,* 627 F.3d 859, 869 (Fed. Cir. 2010) ("[I]nventions with specific applications or improvements to technologies in the marketplace are not likely to be so abstract that they override the statutory language and framework of the Patent Act.").

In view of the foregoing, we will not sustain the Examiner's rejection of claim 1 under 35 U.S.C. § 101. For the same reasons, we also will not sustain the Examiner's rejection of claims 3-6, which depend from claim 1.

DECISION

The Examiner's rejection of claims 1 and 3-6 under 35 U.S.C. § 101 is reversed.

REVERSED

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